CLAIMS

What is claimed is:

1.   A color image printing apparatus, comprising:

a storage unit to separately store image data of a plurality of colors in corresponding memory regions, wherein the image data is divided according to print data received from an external device;

a plurality of developing devices containing toners of a plurality of colors, wherein the developing devices are driven in accordance with the image data stored in the memory regions; and

a control unit, to determine if color data is present in the image data stored in the memory regions, and to drive a developing device of color toner that corresponds to the memory region containing the color data.

2.   The color image printing apparatus of claim 1, wherein the plurality of colors of the image data comprise yellow, cyan, magenta, and black.

3.   The color image printing apparatus of claim 1, wherein the control unit comprises a data separating unit to separate the print data into image data of a plurality of colors based on the colors applied in the printing data, wherein the image data separated by the data separating unit are respectively stored in the memory regions of the storage unit.

4.   A method of controlling an image printing apparatus, the method comprising:
receiving print data;
determining if the print data is color data;
if the print data is not color data, performing general printing;
if the print data is color data, dividing the print data into a plurality of color image data, comprising, yellow image data, cyan image data, magenta image data, and black image data;
storing the color image data in corresponding memory regions; and
driving only developing devices that correspond to memory regions that contain stored color image data.

5.   A color image printing apparatus, comprising:

an interface unit, to input print data from an external source;

a control unit, to control the operation of the color image printing apparatus;

a data separating unit, to separate the print data into a plurality of color data images;

a storage unit, to store the color data images in corresponding color data memory regions; and

a printing engine unit, having a plurality of developing devices that correspond to the color data memory regions;

wherein, during a printing operation, only the developing devices corresponding to color data memory regions that contain color data images are driven.

6.   The color image printing apparatus of claim 5, further comprising a driving select unit for selectively driving the plurality of developing devices, wherein the control unit controls the driving select unit to drive only the developing devices corresponding to the memory regions containing the color data.

7.   The color image printing apparatus according to claim 5, wherein the data separating unit is bypassed when the print data is separated into a plurality of color data images by the external device.

8.   The color image printing apparatus according to claim 5, wherein the color data images comprise a yellow color data image, a cyan color data image, a magenta color data image, and a black color data image.

9.   The color image printing apparatus according to claim 8, wherein the developing devices comprise; a yellow developing device, a cyan developing device, a magenta developing device, and a black developing device.

10.   The color image printing apparatus according to claim 5, wherein the developing devices are fed by a plurality of color toners.

11.   The color image printing apparatus according to claim 10, wherein the printing engine unit further comprises:

a photosensitive drum;

a laser scanning unit, to irradiate a light on the photosensitive drum, the light leaving an electrostatic latent image formed on a surface of the photosensitive drum, the electrostatic latent image corresponding to the print data;

a driving select unit, to selectively drive the developing devices when color image data corresponding to the developing device is present, so that the color toners are jumped from the developing devices onto the photosensitive drum, where the electrostatic latent image was formed, forming a toner image;

a transfer unit, to transfer the toner image from the photosensitive drum onto a recording medium; and

a fusing unit, to fix the toner image onto the recording medium, forming a final image.

12.   The color image printing apparatus according to claim 11, further comprising a charger, to charge the photosensitive drum with a predetermined voltage.

13.   A control method of a color image printing apparatus to develop an electrostatic latent image of a photosensitive medium by using a plurality of developing devices that feed toners of plural colors, the method comprising:

determining whether incoming print data from an external device is monochromatic data or color data; and

if the print data are color data,

dividing the print data into image data of plural colors based on color information contained in the print data, and

storing the divided image data in memory regions of respective colors; and

if there are color data existing in the image data stored in the memory regions for the purpose of color image developing, driving a developing device of color toner that corresponds to the memory region containing the color data to feed the color toner.

14.   The control method of claim 13, wherein the plural colors of the image data correspond to yellow, cyan, magenta and black colors.